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PTO/SB/08A (10-98)

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Substitute for form 1449A/PTO		Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>		Application Number	10/603,860
		Filing Date	June 26, 2003
		First Named Inventor	HASSON, Jaime
		Group Art Unit	2881
		Examiner Name	Not yet known
		Attorney Docket Number	P-5321-US
Sheet	1	of	4

## **U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
KK	A	5,012,200		Meinzer	04-30-1991	
KK	B	5,862,460		Rich	01-19-1999	
KK	C	5,803,854		Abe et al.	05-11-1999	
KK	D	6,930,485		Ichihara	12-11-2001	
KK	E	5,302,914		Arntz et al.	04-12-1994	
KK	F	6,285,261		Dent et al.	09-04-2001	
KK	G	5,694,093		DaSilva et al.	12-02-1997	
KK	H	5,854,571		Pinckley et al.	12-29-1998	
KK	I	5,872,481		Sevic et al.	02-16-1999	
KK	J	8,133,768		Dent	10-17-2000	
KK	K	8,201,452		Dent et al.	03-13-2001	
KK	L	5,345,189		Hornak et al.	09-06-1994	
KK	M	5,264,807		Okubo et al.	11-23-1993	
KK	N	5,909,643		Alihara	06-01-1999	
KK	O	5,928,702		Myers et al.	09-27-1999	
KK	P	5,768,269		Wu	05-26-1998	
KK	Q	5,788,727		Sigmon	07-28-1998	
KK	R	5,888,575		Long	03-23-1999	
KK	S	5,880,633		Leizerovich et al.	03-09-1999	
KK	T	5,739,723		Sigmon et al.	04-14-1998	

## **FOREIGN PATENT DOCUMENTS**

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V	5,872,481			Sevic et al.	02-16-1999	
W	5,861,434			Brozovich et al.	08-26-1997	
X	5,420,541			Upton et al.	05-30-1995	
Y	5,568,084			Bowen et al.	10-22-1998	
Z	5,548,248			Tamamoto et al.	08-20-1996	
AA	5,541,554			Stengel et al.	07-30-1998	
AB	5,724,005			Chen et al.	03-03-1998	
AC	4,439,744			Kumar et al.	03-27-1984	
AD	5,821,351			Puri et al.	04-15-1997	
AE	4,433,312			Kahn	02-21-1984	
AF	5,974,041			Kornfeld et al.	10-26-1999	
AG	3,777,275			Cox	12-04-1973	
AH	6,587,511			Barak et al.	07-01-2003	
AI	5,801,346			Stengel et al	05-04-1999	
AJ	2003/0125085			Hasson et al.	07-03-2003	
AK	6,825,719			Barak et al.	11-30-2004	
AL	10/131,750			Barak et al.	04-24-2002 (filing date)	
AM	5,786,728			Allnikula	07-28-1998	
AN	6,633,189			Nielsen et al.	10-14-2003	
AO	6,147,853			Wallace et al.	11-14-2000	
AP	5,295,162			Zarembowitch	03-15-1994	
AQ	6,271,782			Steensgaard-Madsen	08-07-2001	
AR	6,008,703			Perrott et al.	12-28-1999	
AS	2003/208058			Hietala	11-06-2003	

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				First Named Inventor	HASSON, Jaime
				Group Art Unit	2881
				Examiner Name	Not yet known
Sheet	3	of	4	Attorney Docket Number	P-5321-US

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (where appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		
	AT	FREDRICK H. RAAB, "Efficiency of Outphasing RF Power-Amplifier Systems", IEEE Transactions on Communications. Vol. Com-33, No. 10, Oct 1985, pp. 1094-1099		
	AU	STEVE C. CRIPPS, "RF Power Amplifiers for Wireless Communications", 1999, USA, pp. 219-250		
	AV	D.C. Cox, "Linear Amplification with Nonlinear Components", IEEE Transaction on Communications, December 1974, pp.1942-1945.		
	AW	Bob Stengel and William R. Eisenstadt, "LINC Power Amplifier Combiner Method Efficiency Optimization", IEEE Transaction on Vehicular Technology. Vol.49, No. 1, January 2000, pp.229-234		
	AY	S.A. HETZEL et al., "A LINC Transmitter", University of Bristol, IEEE, 1999, pp. 133-137		
	AZ	S. O. Ampem-Darko, H.S. Al-Raweshidy, "A Novel Technique for Gain/Phase Error Cancellation in LINC Transmitters", 1999 IEEE , pp. 2034-2038		
	BA	J. Nieznanski, "Performance characterization of vector sigma-delta modulation", IECON '98, Proceedings of the 24th Annual Conference of the IEEE, vol. 1, pp. 531-536, 1998		

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	BB	D.L. Neuhoff, "Polar quantization revisited", IEEE International Symposium on Information Theory, 1997 Proceedings, pp. 60, 1997			<input type="checkbox"/>
	BC	N.O. Sokal, "RF Power Amplifiers, Classes A through S – How they operate, and when to use each", Electronics Industries Forum of New England, Professional Program Proceedings, pp. 179-183, 1997			<input type="checkbox"/>
	BD	T. Yamaji, A. Yasuda, H. Tanimoto, Y. Suzuki, "A Digital-to-RF Converter Architecture Suitable for a Digital-to-RF Direct-Conversion Software Defined Radio Transmitter", IEICE Trans. Commun., vol. E83-B, No. 6, pp. 1254-1260, June 2000.			<input type="checkbox"/>
	BE	MICHAEL H. PERROTT ET AL., "A Modeling Approach for Σ-Δ Fractional-N Frequency Synthesizers Allowing Straightforward Noise Analysis", IEEE Journal of Solid-State Circuits, Vol. 37, No. 8, August 2002, pp. 1028-1038			<input type="checkbox"/>
	BF	M.H. Perrott, "Techniques for High Data Rate modulation and Low Power Operation of Fractional-N Frequency Synthesizers", PH.D Dissertation, MIT, September 1997, Retrieved from the Internet, URL: <a href="http://www-mtl.mit.edu/~perrott/pages/thesis.pdf/">http://www-mtl.mit.edu/~perrott/pages/thesis.pdf/</a> , pp. 1-90			<input type="checkbox"/>
	BG	ZHANG et al., "Multibit Oversampled Sigma - Delta A/D Convertor with Nonuniform Quantisation", ELECTRONICS LETTERS, 14 MARCH 1991, UK, Vol. 27, No. 6, pp. 528-529			<input type="checkbox"/>

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